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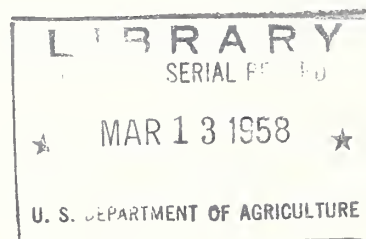
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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division



FIBER AND PROCESSING TEST RESULTS FOR SOME VARIETIES OF COTTON
GROWN BY SELECTED COTTON IMPROVEMENT GROUPS
CROP OF 1957

Prepared in the Standards and Testing Branch

Agriculture - Washington

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 12-1/2 pounds per hour and a twist multiplier of 4.40, crop of 1957

Variety	:Blightmaster:	Gregg
State	:	Texas
Market area	: Lubbock :	Littlefield : Plainview
Period of harvest	: Late :	Late : Late
Raw Cotton Quality	:	:
Classification (official standards)	:	:
Grade-----designation:	SIM :	SIMsp : SIMltsp
Staple length-----inches:	15/16 :	31/32 : 29/32
	:	:
Fiber length (Fibrograph):	:	:
Upper half mean-----inches:	.92 :	.94 : .91
Uniformity-----ratio:	77 :	77 : 82
	:	:
Fiber fineness and maturity:	:	:
Micronaire-----reading <u>1/</u> :	3.6 :	2.6 : 3.2
Fineness (Causticaire)--ug/inch <u>2/</u> :	3.6 :	2.7 : 3.6
Maturity (")----index <u>2/</u> :	74 :	58 : 69
	:	:
Fiber tensile strength (Pressley):	:	:
1/8" Gauge-----index <u>3/</u> :	92 :	96 : 98
Zero " -----1,000 p.s.i.:	81 :	73 : 77
" " -----grams per tex <u>4/</u> :	40.1 :	36.1 : 37.6
	:	:
Nonlint content-----percent <u>5/</u> :	3.1 :	5.5 : 4.5
	:	:
Color of raw cotton: <u>6/</u>	:	:
Reflectance-----Rd:	70.5 :	63.6 : 69.5
Yellowness-----+b:	8.7 :	11.0 : 9.6
	:	:
Sugar content-----percent:	0.2 :	0.2 : 0.2
	:	:
Acid-alkaline value-----pH units <u>7/</u> :	6.8 :	6.7 : 6.6
	:	:
Processing Results	:	:
Manufacturing waste:	:	:
Picker and card-----percent:	8.4 :	10.9 : 9.6
	:	:
Neps-----per 100 sq. in. of card web:	38 :	57 : 24
	:	:
Yarn skein strength:	:	:
8s-----pounds:	332 :	344 : 344
22s----- " :	100 :	102 : 104
Average break factor----- <u>9/</u> :	2428 :	2498 : 2520
	:	:
Yarn appearance:	:	:
8s-----grade:	C+ :	C : C+
22s----- " :	D+ :	D : C
Average yarn appearance--index <u>10/</u> :	90 :	80 : 95
	:	:

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 12-1/2 pounds per hour and a twist multiplier of 4.40, crop of 1957--Continued

Variety	:Paymaster 54B:Paymaster 101:Western Stormproof			
State	:	Texas		
Market area	:	Lockney	: Plainview	: Snyder
Period of harvest	:	Late	: Late	: Late
<u>Raw Cotton Quality</u>				
Classification (official standards):	:	:	:	:
Grade-----designation:	SIMsp	:	SIMltsp	: SIMtg
Staple length-----inches:	7/8	:	15/16	: 29/32
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	.90	:	.93	: .93
Uniformity-----ratio:	80	:	80	: 80
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	2.5	:	2.9	: 3.4
Fineness (Causticaire)-ug/inch 2/:	2.6	:	3.2	: 4.1
Maturity (")---index 2/:	56	:	64	: 69
Fiber tensile strength (Pressley):	:	:	:	:
1/8" Gauge-----index 3/:	94	:	91	: 90
Zero " -----1,000 p.s.i.:	70	:	74	: 79
" " -----grams per tex 4/:	34.6	:	36.6	: 39.1
Nonlint content-----percent 5/:	6.0	:	5.6	: 4.9
Color of raw cotton: 6/	:	:	:	:
Reflectance-----Rd:	68.3	:	70.0	: 64.0
Yellowness-----+b:	10.9	:	9.6	: 11.8
Sugar content-----percent:	0.3	:	0.2	: 0.2
Acid-alkaline value----pH units 7/:	6.7	:	6.8	: 7.0
<u>Processing Results</u>				
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	11.6	:	10.2	: 10.8
Neps----per 100 sq. in. of card web:	100	:	39	: 30
Yarn skein strength:	:	:	:	:
8s-----pounds:	333	:	330	: 315
22s----- " :	99	:	99	: 95
Average break factor-----9/:	2421	:	2409	: 2305
Yarn appearance:	:	:	:	:
8s-----grade:	D+	:	C+	: C+
22s----- " :	D	:	C	: C
Average yarn appearance-index 10/:	75	:	95	: 95

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957

Variety	:	Acala 4-42	:	Arizona 44
State	:	California	:	Arizona
Market area	:	Blythe	:	El Centro
Period of harvest	:	Late	:	Late
Raw Cotton Quality	:	:	:	:
Classification (official standards)	:	:	:	:
Grade-----designation:	:	M	:	SM
Staple length-----inches:	:	1-1/16	:	1-1/16
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	:	1.08	:	1.07
Uniformity-----ratio:	:	78	:	81
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	:	3.2	:	3.6
Fineness (Causticaire)--ug/inch 2/:	:	3.5	:	3.6
Maturity (")-----index 2/:	:	69	:	74
Fiber tensile strength (Pressley):	:	:	:	:
1/8" Gauge-----index 3/:	:	117	:	114
Zero " -----1,000 p.s.i.:	:	88	:	87
" " -----grams per tex 4/:	:	43.6	:	43.1
Nonlint content-----percent 5/:	:	2.7	:	2.2
Color of raw cotton: 6/	:	:	:	:
Reflectance-----Rd:	:	81.5	:	80.5
Yellowness-----+b:	:	7.6	:	8.3
Sugar content-----percent:	:	0.3	:	0.7
Acid-alkaline value-----pH units 7/:	:	6.7	:	6.5
Processing Results	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	:	7.6	:	7.4
Neps-----per 100 sq. in. of card web:	:	18	:	18
Yarn skein strength:	:	:	:	:
22s-----pounds:	:	131	:	136
50s----- " :	:	48	:	50
Average break factor-----2/:	:	2641	:	2746
Yarn appearance:	:	:	:	:
22s-----grade:	:	C	:	C+
50s----- " :	:	D	:	C
Average yarn appearance--index 10/:	:	80	:	95

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957--Continued

Variety	:	Deltapine 15		
State	:	Arkansas		
Market area	:	Bradley	Marianna	Pine Bluff
Period of harvest	:	Late	Late	Late
<u>Raw Cotton Quality</u>				
Classification (official standards)	:			
Grade-----designation:		SIMltsp	Mltsp	SIMltsp
Staple length-----inches:		1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):	:			
Upper half mean-----inches:		1.06	1.06	1.07
Uniformity-----ratio:		77	81	79
Fiber fineness and maturity:	:			
Micronaire-----reading 1/:		4.2	4.4	4.1
Fineness (Causticaire)--ug/inch 2/:		4.3	4.6	4.4
Maturity (")----index 2/:		77	77	75
Fiber tensile strength (Pressley):	:			
1/8" Gauge-----index 3/:		102	100	101
Zero " -----1,000 p.s.i.:		81	77	78
" " -----grams per tex 4/:		40.1	38.1	38.6
Nonlint content-----percent 5/:		3.1	1.9	3.5
Color of raw cotton: 6/	:			
Reflectance-----Rd:		68.5	72.4	71.4
Yellowness-----+b:		8.3	9.2	8.9
Sugar content-----percent:		0.0	0.0	0.2
Acid-alkaline value-----pH units 7/:		7.3	7.4	6.7
<u>Processing Results</u>				
Manufacturing waste:	:			
Picker and card-----percent:		8.5	7.4	9.3
Neps-----per 100 sq. in. of card web:		16	11	16
Yarn skein strength:	:			
22s-----pounds:		116	113	117
50s----- " :		39	40	41
Average break factor-----9/:		2251	2243	2312
Yarn appearance:	:			
22s-----grade:		C+	B	C+
50s----- " :		C	C+	C
Average yarn appearance--index 10/:		95	105	95

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957--Continued

Variety :	Deltapine 15		
State :	California :	Louisiana	
Market area :	Westmorland:	Newellton :	Tallulah
Period of harvest :	Late :	Late :	Late
<u>Raw Cotton Quality</u>			
Classification (official standards) :	:	:	:
Grade-----designation:	SIM :	SIMltsp :	SIMltsp
Staple length-----inches:	1-1/32 :	1-1/16 :	1-1/16
Fiber length (Fibrograph):	:	:	:
Upper half mean-----inches:	1.04 :	1.06 :	1.07
Uniformity-----ratio:	78 :	79 :	80
Fiber fineness and maturity:	:	:	:
Micronaire-----reading 1/:	4.6 :	4.4 :	4.4
Fineness (Causticaire)--ug/inch 2/:	4.8 :	4.6 :	4.4
Maturity (")----index 2/:	79 :	77 :	79
Fiber tensile strength (Pressley):	:	:	:
1/8" Gauge-----index 3/:	100 :	96 :	97
Zero " -----1,000 p.s.i.:	85 :	77 :	76
" " -----grams per tex 4/:	42.1 :	38.1 :	37.6
Nonlint content-----percent 5/:	2.8 :	3.6 :	4.1
Color of raw cotton: 6/	:	:	:
Reflectance-----Rd:	75.3 :	65.1 :	65.5
Yellowness-----+b:	7.2 :	8.3 :	8.7
Sugar content-----percent:	0.1 :	0.0 :	0.0
Acid-alkaline value-----pH units 7/:	7.2 :	7.4 :	7.5
<u>Processing Results</u>			
Manufacturing waste:	:	:	:
Picker and card-----percent:	8.3 :	9.3 :	8.8
Neps-----per 100 sq. in. of card web:	15 :	15 :	9
Yarn skein strength:	:	:	:
22s-----pounds:	108 :	108 :	107
50s-----" :	37 :	36 :	38
Average break factor-----9/:	2113 :	2088 :	2127
Yarn appearance:	:	:	:
22s-----grade:	C+ :	C+ :	C+
50s-----" :	C :	C :	C
Average yarn appearance--index 10/:	95 :	95 :	95

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957--Continued

Variety	:	Deltapine 15	:	Dixie King
State	:	Oklahoma	:	Texas
Market area	:	Idabel	:	Munday
Period of harvest	:	Late	:	Late
Period of harvest	:	Late	:	Late
Raw Cotton Quality	:	:	:	:
Classification (official standards)	:	:	:	:
Grade-----designation:	:	LMsp	:	LMltsp
Staple length-----inches:	:	1-1/16	:	1-3/32
Staple length-----inches:	:	1-1/16	:	1-1/32
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	:	1.07	:	1.10
Uniformity-----ratio:	:	78	:	75
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	:	4.2	:	2.6
Fineness (Causticaire)--ug/inch 2/:	:	4.3	:	2.6
Maturity (")----index 2/:	:	78	:	59
Fiber tensile strength (Pressley):	:	:	:	:
1/8" Gauge-----index 3/:	:	97	:	113
Zero " -----1,000 p.s.i.:	:	77	:	85
" " -----grams per tex 4/:	:	38.1	:	42.1
Nonlint content-----percent 5/:	:	5.8	:	5.8
Color of raw cotton: 6/	:	:	:	:
Reflectance-----Rd:	:	64.0	:	67.5
Yellowness-----+b:	:	8.7	:	10.4
Sugar content-----percent:	:	0.0	:	0.2
Acid-alkaline value-----pH units 7/:	:	7.4	:	6.7
Processing Results	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	:	10.0	:	11.9
Neps-----per 100 sq. in. of card web:	:	11	:	52
Yarn skein strength:	:	:	:	:
22s-----pounds:	:	112	:	124
50s----- " :	:	39	:	46
Average break factor-----9/:	:	2207	:	2514
Yarn appearance:	:	:	:	:
22s-----grade:	:	B	:	BG
50s----- " :	:	C+	:	BG
Average yarn appearance--index 10/:	:	105	:	60

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957--Continued

Variety	:	Lankart		
State	:	Oklahoma	:	Texas
Market area	:	Altus	:	Levelland : Stamford
Period of harvest	:	Late	:	Late : Late
<u>Raw Cotton Quality</u>				
Classification (official standards)	:	:	:	:
Grade-----designation:	Msp	:	SIMltsp	: SIMsp
Staple length-----inches:	31/32	:	31/32	: 15/16
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	.98	:	.97	: .96
Uniformity-----ratio:	79	:	76	: 79
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading <u>1/</u> :	3.6	:	2.8	: 4.0
Fineness (Causticaire)--ug/inch <u>2/</u> :	4.0	:	3.0	: 4.5
Maturity (")----index <u>2/</u> :	71	:	62	: 74
Fiber tensile strength (Pressley):	:	:	:	:
1/8" Gauge-----index <u>3/</u> :	93	:	88	: 97
Zero " -----1,000 p.s.i.:	74	:	70	: 76
" " -----grams per tex <u>4/</u> :	36.6	:	34.6	: 37.6
Nonlint content-----percent <u>5/</u> :	4.0	:	6.4	: 2.7
Color of raw cotton: <u>6/</u>	:	:	:	:
Reflectance-----Rd:	67.4	:	67.8	: 64.5
Yellowness-----+b:	10.9	:	10.6	: 10.6
Sugar content-----percent:	0.2	:	0.2	: 0.2
Acid-alkaline value-----pH units <u>7/</u> :	7.0	:	6.6	: 6.9
<u>Processing Results</u>				
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	9.7	:	10.4	: 9.5
Neps-----per 100 sq. in. of cardweb	14	:	31	: 12
Yarn skein strength:	:	:	:	:
22s-----pounds:	101	:	100	: 101
50s-----" :	34	:	34	: 35
Average break factor----- <u>9/</u> :	1961	:	1950	: 1986
Yarn appearance:	:	:	:	:
22s-----grade:	C+	:	D+	: B
50s-----" :	C	:	D	: C
Average yarn appearance--index <u>10/</u> :	95	:	75	: 100

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957--Continued

Variety	:	Lankart	:	Lankart 57
State	:		:	Texas
Market area	:	Waxahachie	:	Lubbock : Wilson
Period of harvest	:	Late	:	Late : Late
Raw Cotton Quality	:	:	:	:
Classification (official standards)	:	:	:	:
Grade-----designation:	:	SIMltsp	:	SIMltsp : SIMltsp
Staple length-----inches:	:	7/8	:	31/32 : 15/16
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	:	.88	:	.99 : .95
Uniformity-----ratio:	:	78	:	79 : 78
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	:	4.4	:	2.9 : 2.8
Fineness (Causticaire)--ug/inch 2/:	:	4.7	:	3.2 : 3.1
Maturity (")----index 2/:	:	77	:	64 : 62
Fiber tensile strength (Pressley):	:	:	:	:
1/8" Gauge-----index 3/:	:	88	:	91 : 90
Zero " -----1,000 p.s.i.:	:	83	:	70 : 69
" " -----grams per tex 4/:	:	41.1	:	34.6 : 34.2
Nonlint content-----percent 5/:	:	2.8	:	5.5 : 4.7
Color of raw cotton: 6/	:	:	:	:
Reflectance-----Rd:	:	61.0	:	67.5 : 67.5
Yellowness-----+b:	:	9.7	:	10.1 : 10.1
Sugar content-----percent:	:	0.0	:	0.3 : 0.3
Acid-alkaline value-----pH units 7/:	:	7.2	:	6.5 : 6.6
Processing Results	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	:	9.0	:	9.7 : 10.2
Neps-----per 100 sq. in. of card web:	:	19	:	31 : 50
Yarn skein strength:	:	:	:	:
22s-----pounds:	:	89	:	102 : 100
50s-----" :	:	36	:	36 : 34
Average break factor-----9/:	:	1771	:	2022 : 1950
Yarn appearance:	:	:	:	:
22s-----grade:	:	B	:	C : D
50s-----" :	:	C	:	D : BG
Average yarn appearance--index 10/:	:	100	:	80 : 65

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1957--Continued

Variety	Lankart 611	Northern Star	Stoneville 7
State	Texas	Arkansas	
Market area	Idalou	O'Brien	Leachville
Period of harvest	Late	Late	Late
<u>Raw Cotton Quality</u>			
Classification (official standards)			
Grade-----designation:	SIMltsp	Mltsp	SIMtg
Staple length-----inches:	31/32	1	1-1/32
Fiber length (Fibrograph):			
Upper half mean-----inches:	.95	1.02	1.04
Uniformity-----ratio:	77	79	75
Fiber fineness and maturity:			
Micronaire-----reading 1/:	2.6	3.2	3.3
Fineness (Causticaire)--ug/inch 2/:	2.8	3.8	3.6
Maturity (")----index 2/:	59	66	69
Fiber tensile strength (Pressley):			
1/8" Gauge-----index 3/:	99	97	92
Zero " -----1,000 p.s.i.:	76	77	72
" " -----grams per tex 4/:	37.6	38.1	35.6
Nonlint content-----percent 5/:	4.8	2.4	3.7
Color of raw cotton: 6/			
Reflectance-----Rd:	70.5	72.0	59.5
Yellowness-----+b:	9.0	10.2	11.9
Sugar content-----percent:	0.2	0.2	0.0
Acid-alkaline value-----pH units 7/:	6.4	6.8	7.3
<u>Processing Results</u>			
Manufacturing waste:			
Picker and card-----percent:	10.1	9.4	11.5
Neps-----per 100 sq. in. of card web:	39	17	19
Yarn skein strength:			
22s-----pounds:	111	112	106
50s----- " :	39	39	37
Average break factor-----9/:	2196	2207	2091
Yarn appearance:			
22s-----grade:	BG	C+	C+
50s----- " :	BG	C	C
Average yarn appearance--index 10/:	60	95	95

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour and a twist multiplier of 3.80, crop of 1957

Variety	:	Acala 1517 C		
State	:	New Mexico		
Market area	:	Artesia	:	Carlsbad
Period of harvest	:	Midseason	:	Late
Raw Cotton Quality	:		:	
Classification (official standards)	:		:	
Grade-----designation:		SM	:	M
Staple length-----inches:		1-3/16	:	1-5/32
Fiber length (Fibrograph):	:		:	
Upper half mean-----inches:		1.17	:	1.16
Uniformity-----ratio:		81	:	83
Fiber fineness and maturity:	:		:	
Micronaire-----reading 1/:		3.8	:	3.3
Fineness (Causticaire)--ug/inch 2/:		3.8	:	3.5
Maturity (")----index 2/:		76	:	71
Fiber tensile strength (Pressley):	:		:	
1/8" Gauge-----index 3/:		110	:	116
Zero " -----1,000 p.s.i.:		84	:	85
" " -----grams per tex 4/:		41.6	:	42.1
Nonlint content-----percent 5/:		1.9	:	2.6
Color of raw cotton: 6/	:		:	
Reflectance-----Rd:		76.7	:	73.9
Yellowness-----+b:		8.3	:	7.7
Sugar content-----percent:		0.2	:	0.3
Acid-alkaline value-----pH units 7/:		8.0	:	6.8
Processing Results	:		:	
Manufacturing waste:	:		:	
Picker and card-----percent:		8.0	:	7.6
Comber----- " :		13.0	:	13.6
Neps-----per 100 sq. in. of card web:		23	:	28
Yarn skein strength: 8/	:		:	
22s-----pounds:		137 (148)	:	143 (153)
50s----- " :		51 (54)	:	51 (56)
Average break factor-----9/:		2782(2979)	:	2848 (3083)
Yarn appearance: 8/	:		:	
22s-----grade:		C+ (B)	:	C+ (C+)
50s----- " :		C (C+)	:	D+ (C)
Average yarn appearance--index 10/:		95 (105)	:	90 (95)

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour and a twist multiplier of 3.80, crop of 1957--Continued

Variety	Arizona 44	Delfos 9169	
State	Arizona	Arkansas	Missouri
Market area	Marana	Pine Bluff	Hornersville
Period of harvest	Midseason	Late	Late
Raw Cotton Quality			
Classification (official standards)			
Grade-----designation:	M	SIMltsp	IMsp
Staple length-----inches:	1-1/16	1-3/32	1-3/32
Fiber length (Fibrograph):			
Upper half mean-----inches:	1.08	1.10	1.06
Uniformity-----ratio:	81	76	74
Fiber fineness and maturity:			
Micronaire-----reading <u>1/</u> :	3.9	3.7	3.6
Fineness (Causticaire)--ug/inch <u>2/</u> :	3.8	3.8	3.9
Maturity (")----index <u>2/</u> :	78	75	72
Fiber tensile strength (Pressley):			
1/8" Gauge-----index <u>3/</u> :	110	97	91
Zero " -----1,000 p.s.i.:	85	72	73
" " -----grams per tex <u>4/</u> :	42.1	35.6	36.1
Nonlint content-----percent <u>5/</u> :	2.6	3.9	4.0
Color of raw cotton: <u>6/</u>			
Reflectance-----Rd:	74.5	70.7	63.2
Yellowness-----+b:	8.2	8.7	10.7
Sugar content-----percent:	0.2	0.1	0.0
Acid-alkaline value-----pH units <u>7/</u> :	7.0	7.4	7.5
Processing Results			
Manufacturing waste:			
Picker and card-----percent:	9.1	12.0	11.5
Comber-----"	15.0	16.0	16.6
Neps-----per 100 sq. in. of card web:	29	23	31
Yarn skein strength: <u>8/</u>			
22s-----pounds:	128(142)	102(115)	104(117)
50s-----"	47(51)	36(41)	36(41)
Average break factor----- <u>9/</u> :	2583(2837)	2022(2290)	2044(2312)
Yarn appearance: <u>8/</u>			
22s-----grade:	C (C)	C (C)	D+ (C)
50s-----"	D (C)	D (C)	BG (D+)
Average yarn appearance--index <u>10/</u> :	80 (90)	80 (90)	70 (85)

Table 4.--Results of classification, fiber tests, and combed yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 4-1/2 pounds per hour and a twist multiplier of 3.60, crop of 1957

Variety :	Pima S-1		
State :	Arizona		
Market area :	Marana :	Peoria :	Safford
Period of harvest :	Midseason :	Midseason :	Late
<u>Raw Cotton Quality</u>			
Classification (official standards) :	:	:	:
Grade-----:	4 :	3 :	3
Staple length-----inches:	1-3/8 :	1-7/16 :	1-7/16
Fiber length (array):	:	:	:
Upper quartile-----inches:	1.42 :	1.43 :	1.45
Coefficient of variation---percent:	33 :	30 :	29
Fiber fineness and maturity:	:	:	:
Micronaire-----reading <u>1/</u> :	3.6 :	3.9 :	3.4
Fineness (Causticaire)--ug/inch <u>2/</u> :	3.3 :	3.3 :	3.2
Maturity (")----index <u>2/</u> :	76 :	82 :	76
Fiber tensile strength (pressley):	:	:	:
1/8" Gauge-----index <u>3/</u> :	158 :	162 :	152
Zero " -----1,000 p.s.i.:	101 :	98 :	98
" " -----grams per tex <u>4/</u> :	50.0 :	48.5 :	48.5
Nonlint content-----percent <u>5/</u> :	3.6 :	3.2 :	2.7
Color of raw cotton: <u>6/</u>	:	:	:
Reflectance-----Rd:	65.3 :	67.0 :	66.3
Yellowness-----+b:	9.9 :	10.0 :	11.1
Sugar content-----percent:	0.2 :	0.2 :	0.2
Acid-alkaline value-----pH units <u>7/</u> :	6.9 :	6.6 :	6.6
<u>Processing Results</u>			
Manufacturing waste:	:	:	:
Picker and card-----percent:	11.6 :	10.8 :	11.7
Comber----- " :	15.8 :	15.3 :	15.5
Neps-----per 100 sq. in. of card web:	10 :	12 :	16
Yarn skein strength:	:	:	:
50s-----pounds:	71 :	72 :	73
80s----- " :	40 :	40 :	41
Average break factor----- <u>9/</u> :	3375 :	3400 :	3465
Yarn appearance:	:	:	:
50s-----grade:	B :	B :	B
80s----- " :	C+ :	C+ :	C+
Average yarn appearance--index <u>10/</u> :	105 :	105 :	105

Table 4.--Results of classification, fiber tests, and combed yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 4-1/2 pounds per hour and a twist multiplier of 3.60, crop of 1957--Continued

Variety		Pima S-1	
State	Arizona	Texas	
Market area	Standfield	Pecos	
Period of harvest	Midseason	Late	
<u>Raw Cotton Quality</u>			
Classification (official standards)			
Grade-----	4	4	
Staple length-----inches:	1-7/16	1-7/16	
Fiber length (array):			
Upper quartile-----inches:	1.43	1.43	
Coefficient of variation---percent:	31	31	
Fiber fineness and maturity:			
Micronaire-----reading 1/:	3.7	3.4	
Fineness (Causticaire)--ug/inch 2/:	3.2	2.9	
Maturity (")----index 2/:	79	78	
Fiber tensile strength (Pressley):			
1/8" Gauge-----index 3/:	162	168	
Zero " -----1,000 p.s.i.:	99	104	
" " -----grams per tex 4/:	49.0	51.5	
Nonlint content-----percent 5/:	3.7	4.0	
Color of raw cotton: 6/			
Reflectance-----Rd:	68.0	68.6	
Yellowness-----+b:	10.3	10.1	
Sugar content-----percent:	0.2	0.2	
Acid-alkaline value-----pH units 7/:	6.7	6.9	
<u>Processing Results</u>			
Manufacturing waste:			
Picker and card-----percent:	12.6	10.7	
Comber-----"	15.9	14.4	
Neps-----per 100 sq. in. of card web:	16	8	
Yarn skein strength:			
50s-----pounds:	74	74	
80s-----"	40	41	
Average break factor-----9/:	3450	3490	
Yarn appearance:			
50s-----grade:	B	B	
80s-----"	C+	B	
Average yarn appearance--index 10/:	105	110	

FOOTNOTES

- 1/ Fiber fineness and maturity in combination as measured on untreated samples using the curvilinear scale for upland cotton.
- 2/ Determined by the Causticaire method using the Micronaire instrument.
- 3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of the 1954 commercial crop of upland cotton in the United States.
- 4/ Tex is the universal unit for designating linear density of textile materials as adopted by the International Organization for Standardization (ISO). A tex unit equals the weight in grams of 1,000 meters of the material.
- 5/ As determined by means of the Shirley Analyzer.
- 6/ Determined by the Nickerson-Hunter Colorimeter on raw stock. Rd values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.
- 7/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.
- 8/ Data in parentheses are for combed yarn.
- 9/ Based on yarn skein strength (number x strength) of the two yarn numbers spun.
- 10/ Based on two numbers spun. Index of average quality equals 100.
- 11/ Data reported is for 44s yarn which was substituted for 50s because of excessive spinning end breakage.

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